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09/445,356	03/01/2000	NICOLAS HOCHET	VEI0318PUSA	9843

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EXAMINER

MUSSER, BARBARA J

ART UNIT	PAPER NUMBER
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1733

DATE MAILED: 10/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/445,356	Applicant(s) HOCHET ET AL.	
	Examiner Barbara J. Musser	Art Unit 1733	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 10 June 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal-matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 and 10-53 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 10-53 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 24-41 and 48-53 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Regarding claims 24-29, the specification does not disclose multiple flexures in the range of 3-45 degrees having contact at the skin portion. Regarding claims 30-35, the specification does not disclose the deformation of the skin being greater than the thickness of the skin. While figure 2 shows deformation of the skin, the drawings are not considered working drawings, and exact measurements, such as the thickness of one layer versus its height, cannot be determined accurately from the figures. Regarding claims 36-41, the specification does not disclose the angle of deformation of the skin into the core. The only angle that can be inferred by the specification is the exact angle in the figures, and this cannot be considered to constitute a range. Regarding claims 48-53, the specification does not disclose forming a hinge by cutting through a face sheet and the core wherein the cutting produces local crushing of the core. The specification indicates the core can be crushed prior to cutting, but that is not a different embodiment where a hinge is

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attached. While the specification discloses cutting through the face sheet so as to not crush the sandwich material(Pg. 7, ll. 5-10) it does not disclose that further cutting crushes the core material.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 24-29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 24-29, it is unclear what is meant by the multiples flexures are in the range of 3-45 degrees of separation of the hinged portions having contact at the skin. It is unclear what angle is being measured.

Specification

5. The amendment filed 6/10/04 is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: the deformation of the skin being greater than the thickness of the first skin, the deformation of the first skin being at an angle greater than 30 degrees and the cutting producing local deformation of the core.

Applicant is required to cancel the new matter in the reply to this Office Action.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-3, 5, 6, 10-14, 16-23, and 25-53 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art in view of Dubois, Komarek et al.(U.S Patent 5,466,211), and optionally Ilzhoefer et al.

The admitted prior art discloses forming a composite sandwich panel by cold pressing a reinforced thermoplastic skin, a thermoplastic core, and a second reinforced thermoplastic skin in a cold mold to form a panel which is used in automobiles. The skins are preheated to a softening temperature prior to molding. After molding, a separate hinge can be added to the panel.(Specification, pages 1-2)

The admitted prior art is silent as to the molding pressure. Dubois discloses forming a thermoplastic honeycomb panel like those in the admitted prior art by molding the panel at 10-30 bar.(Abstract) It would have been obvious to one of ordinary skill in the art at the time the invention was made to mold the panel of the admitted prior art at 10-30 bar since Dubois discloses that panels like those of the admitted prior art are molded at 10-30 bar.

The admitted prior art does not disclose forming the hinge by cutting an incision through one skin and the entire core of the panel while leaving the second skin intact. Komarek et al. discloses it is known when forming a hinge in a honeycomb panel to cut

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an incision through one skin and the entire core of the panel while leaving the second skin intact.(Col. 2, ll. 19-29) It would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the separate hinge of the admitted prior art with an integral hinge formed by cutting through one skin and the entire core of the panel while leaving the second skin intact since forming a slit to facilitate hinge formation in either thermoplastic or paperboard would have been obvious as Komarek et al. discloses forming such hinges in honeycomb panels, since this would reduce the cost as a separate hinge would not be required, and optionally, particularly since Ilzhoefer shows it is known to form integral hinges in fiber-reinforced thermoplastic.(Abstract) Since Komarek et al. discloses forming a slit in a paperboard honeycomb, one in the art would reasonably have expected success when forming a slit to use as a hinge in a thermoplastic honeycomb. Komarek et al. discloses deforming the first skin into the core. Since the same materials are used as applicant, one in the art would appreciate that the panel would also be capable of multiple flexures at the hinge.

Regarding claims 2 and 42-47, the references do not disclose when or where the hinge is formed in the panel. One in the art reading the references as a whole would appreciate that there is no criticality in the timing of forming the hinge. Therefore, one in the art would readily appreciate that it would have been within the purview of one in the art to form the hinge after formation of the panel while still in the mold since this would reduce processing time. Only the expected results would be achieved.

Regarding claim 3, Komarek et al. discloses a serrated cutting blade can be used. (Col. 5, ll. 44-46) The reference does not disclose how a serrated cutting blade is used. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a serrated knife to cut through a first skin and core in a straight downward motion since this would prevent tearing of the board edges. One in the art would understand since the knife is not intended to cut entirely through the honeycomb, pressing straight down would not necessarily cut through all of the honeycomb core but would leave small portions uncut because the blade is serrated. Thus one in the art would appreciate that the knife blade would be moved horizontally as well as vertically to ensure that all of the honeycomb core is cut.

Regarding claims 5 and 6, the references do not disclose when or where the hinge is formed in the panel. One in the art reading the references as a whole would appreciate that there is no criticality in the timing of forming the hinge. Therefore, one in the art would readily appreciate that it would have been within the purview of one in the art to form the hinge either before or after removal from the mold. Only the expected results would be achieved.

Regarding claim 10, the references do not specifically state that the subassembly of skins and core is pre-heated prior to molding. However one in the art would appreciate that the pre-assembly could be preheated to ensure better molding particularly since the molded panel can be formed into a curved shape and when forming such a shape preheating the core as well as the skins would enable easier molding and would do so for that reason.

Regarding claim 11, Dubois discloses the skins are pre-heated to 160-200C during the forming process.(Oral translation) It would have been obvious to one of ordinary skill in the art at the time the invention was made to pre-heat the skins of the admitted prior art to 160-200 C since Dubois discloses that panels like those of the admitted prior art are made by first pre-heating the skins to 160-200 C.

Regarding claim 12, the admitted prior art discloses the thermoplastic is reinforced but not with what. Such reinforcement is conventionally fibers as shown for example by Ilzhoefer et al.(Abstract) It would have been obvious to one of ordinary skill in the art at the time the invention was made to use glass fiber as the reinforcement in the thermoplastic of the admitted prior art since Ilzhoefer et al. that reinforced panels in automobiles can be formed from glass fiber reinforcement and since the use of fiber as reinforcement is well-known and conventional in the art.

Regarding claim 13, the admitted prior art is silent as to the thermoplastic used to form the panel. Dubois(oral translation) discloses using polypropylene to form the skins and core of the honeycomb. It would have been obvious to one of ordinary skill in the art at the time the invention was made to form the panels of the admitted prior art from polypropylene since Dubois discloses that panels like those of the admitted prior art are made from polypropylene.

Regarding claim 14, the admitted prior art discloses the core is cellular but does not specifically state it is honeycomb. Dubois discloses the panel contains a honeycomb core.(Abstract) It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the core of the admitted prior art

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honeycomb since Dubois discloses that panels like those of the admitted prior have honeycomb cores.

Regarding claims 16 and 17, the references cited do not specifically disclose the incision only being 0.5 mm thick. Komarek et al. discloses forming the hinge by slitting the material.((Col. 1, ll. 61-62) Since the material is slit, the incision is only the width of the knife blade, and since most knives have blades less than 0.5 mm thick, one in the art would appreciate that the incision of Komarek et al. would be less than 0.5 mm thick.

Regarding claims 18 and 19, while the references are silent to the exact depth to which the incision is cut, one in the art would appreciate that cutting the depth to less than the thickness of the core would allow additional material to act as part of the hinge, strengthening it, and would do so for that reason.

Regarding claims 20 and 21, the admitted prior art panel consists of three layers- 2 reinforced thermoplastic skins and a thermoplastic core.

Regarding claims 22 and 23, since the admitted prior art is only three layers, and Komarek et al. discloses cutting through one skin and the core, one in the art would appreciate that the hinge would be formed from the only remaining skin.

Regarding claims 24-29, since the figures of Komarek et al.(Figures 2 and 3) appear to show the same angle as applicant, it is considered to show a panel capable of multiple flexures in the range of 3-45 degrees of separation of the hinged portions having contact at the skins.

Regarding claims 30-35, the deformation is greater than the thickness of the core.(Komarek et al., Figure 2)

Regarding claims 36-41, the deformation is at an angle greater than 30 degrees into the core.(Komarek et al., Figure 2)

Regarding claims 44-53, the cutting produces crushing of the core.(Komarek et al., Figure 2)

8. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over the references as applied to claim 1 above, and further in view of Northall.

The references cited above do not disclose by two serrated blades which reciprocate to cut the hinge in the panel of the admitted prior art, Dubois, Komarek et al., and optionally Ilzhoefer et al. Northall discloses a method of cutting using two serrated blades which reciprocate to prevent buckling of the blades.(Col. 1, ll. 15-21) Such cutting devices are well-known and conventional in the cutting arts as shown for example by common electric bread knives and by Northall. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use this well-known and conventional cutting blade system since it prevents bending of the cutting blade(Col. 1, ll. 15-21) and since it cuts more quickly than using only one blade particularly since these cutting blades are so well-known and conventional in the cutting art.

9. Claims 15, 21, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art in view of Komarek et al., and optionally Ilzhoefer et al.

The admitted prior art discloses forming a composite sandwich panel by cold pressing a reinforced thermoplastic skin, a thermoplastic core, and a second reinforced thermoplastic skin in a cold mold to form a panel which is used in automobiles. The skins are preheated to a softening temperature prior to molding. After molding, a separate hinge can be added to the panel.(Specification, pages 1-2)

The admitted prior art does not disclose forming the hinge by cutting only a narrow incision through one skin and the entire core of the panel while leaving the second skin intact. Komarek et al. discloses it is known when forming a hinge in a honeycomb panel to cut a narrow incision through one skin and the entire core of the panel while leaving the second skin intact.(Col. 2, ll. 19-29) It would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the separate hinge of the admitted prior art with an integral hinge formed by cutting through one skin and the entire core of the panel while leaving the second skin intact since forming a slit to facilitate hinge formation in either thermoplastic or paperboard would have been obvious as Komarek et al. discloses forming such hinges in honeycomb panels, since this would reduce the cost as a separate hinge would not be required, and optionally, particularly since Ilzhoefer shows it is known to form integral hinges in fiber-reinforced thermoplastic.(Abstract) Since Komarek et al. discloses forming a slit in a paperboard honeycomb, one in the art would reasonably have expected success when forming a slit to use as a hinge in a thermoplastic honeycomb.

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10. Claims 1, 2, 5, 6, 10-14, 18-23, and 42-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art in view of Dubois, Yoshinori, and optionally Ilzhoefer et al.

The admitted prior art discloses forming a composite sandwich panel by cold pressing a reinforced thermoplastic skin, a thermoplastic core, and a second reinforced thermoplastic skin in a cold mold to form a panel which is used in automobiles. The skins are preheated to a softening temperature prior to molding. After molding, a separate hinge can be added to the panel.(Specification, pages 1-2)

The admitted prior art is silent as to the molding pressure. Dubois discloses forming a thermoplastic honeycomb panel like those in the admitted prior art by molding the panel at 10-30 bar.(Abstract) It would have been obvious to one of ordinary skill in the art at the time the invention was made to mold the panel of the admitted prior art at 10-30 bar since Dubois discloses that panels like those of the admitted prior art are molded at 10-30 bar.

The admitted prior art does not disclose forming the hinge by cutting only a narrow incision through one skin and the entire core of the panel while leaving the second skin intact. Yoshinori discloses a method of forming an integral hinge in a thermoplastic honeycomb panel which is used in automobiles by cutting a narrow incision through one skin and the entire core of the panel while leaving the second skin intact.(Figure 3, Abstract, Oral translation) It would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the separate hinge of the admitted prior art with an integral hinge formed by cutting through one skin and

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the entire core of the panel while leaving the second skin intact since this would reduce the cost as a separate hinge would not be required and since Yoshinori discloses forming such hinges in honeycomb panels used in automobiles like the admitted prior art does, and optionally particularly since Ilzhoefer shows it is known to form integral hinges in fiber-reinforced thermoplastic.(Abstract) While the figures do not show deformation of the skin into the core, a knife blade presses down, and anyone who has cut material would appreciate that the layer that is cut is pressed into the layers below it. For example, in cutting both bread and wood, cutting from above presses the layers downward, resulting in either compressed layers as in bread or fragments of wood facing away from the knife. Therefore one skilled in the art of cutting would recognize that cutting from only one side would press the layers downward, producing deformation of the core. Since the same materials are used as applicant, one in the art would appreciate that the panel would also be capable of multiple flexures at the hinge.

Regarding claims 2 and 42-47, the references do not disclose when or where the hinge is formed in the panel. One in the art reading the references as a whole would appreciate that there is no criticality in the timing of forming the hinge. Therefore, one in the art would readily appreciate that it would have been within the purview of one in the art to form the hinge after formation of the panel while still in the mold since this would reduce processing time. Only the expected results would be achieved.

Regarding claims 5 and 6, the references do not disclose when or where the hinge is formed in the panel. One in the art reading the references as a whole would appreciate that there is no criticality in the timing of forming the hinge. Therefore, one in

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the art would readily appreciate that it would have been within the purview of one in the art to form the hinge either before or after removal from the mold. Only the expected results would be achieved.

Regarding claim 10, the references do not specifically state that the subassembly of skins and core is pre-heated prior to molding. However one in the art would appreciate that the pre-assembly could be preheated to ensure better molding particularly since the molded panel can be formed into a curved shape and when forming such a shape preheating the core as well as the skins would enable easier molding.

Regarding claim 11, Dubois discloses the skins are pre-heated to 160-200C during the forming process.(Oral translation) It would have been obvious to one of ordinary skill in the art at the time the invention was made to pre-heat the skins of the admitted prior art to 160-200 C since Dubois discloses that panels like those of the admitted prior art are made by first pre-heating the skins to 160-200 C.

Regarding claim 12, the admitted prior art discloses the thermoplastic is reinforced but not with what. Such reinforcement is conventionally fibers as shown for example by Ilzhoefer et al.(Abstract) It would have been obvious to one of ordinary skill in the art at the time the invention was made to use glass fiber as the reinforcement in the thermoplastic of the admitted prior art since Ilzhoefer et al. that reinforced panels in automobiles can be formed from glass fiber reinforcement and since the use of fiber as reinforcement is well-known and conventional in the art.

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Regarding claim 13, the admitted prior art is silent as to the thermoplastic used to form the panel. Both Dubois(oral translation) and Yoshinori(oral translation) disclose using polypropylene to form the skins and core of the honeycomb. It would have been obvious to one of ordinary skill in the art at the time the invention was made to form the panels of the admitted prior art from polypropylene since Dubois and Yoshinori both disclose that panels like those of the admitted prior art are made from polypropylene.

Regarding claim 14, the admitted prior art discloses the core is cellular but does not specifically state it is honeycomb. Dubois discloses the panel contains a honeycomb core.(Abstract) It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the core of the admitted prior art honeycomb since Dubois discloses that panels like those of the admitted prior have honeycomb cores.

Regarding claims 18 and 19, while the references are silent to the exact depth to which the incision is cut, one in the art would appreciate that cutting the depth to less than the thickness of the core would allow additional material to act as part of the hinge, strengthening it, and would do so for that reason.

Regarding claims 20 and 21, the admitted prior art panel consists of three layers- 2 reinforced thermoplastic skins and a thermoplastic core.

Regarding claims 22 and 23, since the admitted prior art is only three layers, and Yoshinori discloses cutting through one skin and the core, one in the art would appreciate that the hinge would be formed from the only remaining skin.

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11. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over the references as applied to claim 1 above, and further in view of Mumper.

The references cited above do not disclose the type of blade used to cut the panel of the admitted prior art, Dubois, Yoshinori, and optionally Ilzhoefer et al. Mumper discloses cutting corrugated board into sections using a serrated blade which is pressed downward.(Figure 1; Col. 1, ll. 65-67) It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a serrated knife to cut through a first skin and core in a straight downward motion since this would prevent tearing of the board edges as taught by Mumper.(Col. 1, ll. 7-12) While the reference discloses a straight downward vertical slice, one in the art would understand since the knife is not intended to cut entirely through the honeycomb, pressing straight down would not necessarily cut through all of the honeycomb core but would leave small portions uncut because the blade is serrated. Thus one in the art would appreciate that the knife blade would be moved horizontally as well as vertically to ensure that all of the honeycomb core is cut.

12. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over the references as applied to claim 1 above, and further in view of Northall.

The references cited above do not disclose by two serrated blades which reciprocate to cut the hinge in the panel of the admitted prior art, Dubois, Yoshinori, and optionally Ilzhoefer et al. Northall discloses a method of cutting using two serrated blades which reciprocate to prevent buckling of the blades.(Col. 1, ll. 15-21) Such cutting devices are well-known and conventional in the cutting arts as shown for

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example by common electric bread knives and by Northall. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use this well-known and conventional cutting blade system since it prevents bending of the cutting blade (Col. 1, ll. 15-21) and since it cuts more quickly than using only one blade particularly since these cutting blades are so well-known and conventional in the cutting art.

13. Claims 15, 21, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art in view of Yoshinori, and optionally Ilzhoefer et al.

The admitted prior art discloses forming a composite sandwich panel by cold pressing a reinforced thermoplastic skin, a thermoplastic core, and a second reinforced thermoplastic skin in a cold mold to form a panel which is used in automobiles. The skins are preheated to a softening temperature prior to molding. After molding, a separate hinge can be added to the panel. (Specification, pages 1-2)

The admitted prior art does not disclose forming the hinge by cutting only a narrow incision through one skin and the entire core of the panel while leaving the second skin intact. Yoshinori discloses a method of forming an integral hinge in a thermoplastic honeycomb panel which is used in automobiles by cutting a narrow incision through one skin and the entire core of the panel while leaving the second skin intact. (Figure 3, Abstract, Oral translation) It would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the separate hinge of the admitted prior art with an integral hinge formed by cutting through one skin and

the entire core of the panel while leaving the second skin intact since this would reduce the cost as a separate hinge would not be required and since Yoshinori discloses forming such hinges in honeycomb panels used in automobiles like the admitted prior art does, particularly since Ilzhoefer shows it is known to form integral hinges in fiber-reinforced thermoplastic.(Abstract) It is noted that the joining pressure is a method limitation which does not limit the product.

Response to Arguments

14. Applicant's arguments filed 6/10/04 have been fully considered but they are not persuasive.

Regarding applicant's argument that the figures clearly show the deformation of the first skin is greater than its thickness and is at an angle of greater than 30 degrees, while it does show an angle of greater than 30 degrees, it does not show all angles greater than 30 degrees and can be considered to disclose only the angle specifically shown. It is not clear from the drawings that the deformation of the first skin is greater than the thickness of the first skin, though it does show a definite deformation. However, the drawings are not considered working drawings and therefore exact measurements from them cannot be performed.

Regarding applicant's argument that the references do not disclose a hinge capable of multiple flexures, since the layers are made of the same materials as applicant, they would be capable of the same things, i.e. multiple flexures of the hinge.

Conclusion

15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Barbara J. Musser whose telephone number is (571) 272-1222. The examiner can normally be reached on Monday-Thursday; alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Blaine Copenheaver can be reached on (571)-272-1156. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


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